Subject: Re: Iso-contours at maximum/minimum levels
Posted by pgrigis on Thu, 29 Jan 2009 23:14:52 GMT
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David Fanning wrote:
> Gianluca Li Causi writes:
>
>> In order to find the iso-value lines of a 2D surface I'm using the
>> CONTOUR procedure, which works very well except that it's NOT ABLE to
>> compute the contour when the LEVEL equals the maximum or minimum of
>> the function.
>>
>> I've the following simple fuction:
>> Z = shift(dist(100, 100), 50,50)
>> Z = abs(Z - max(Z)*.3)
>> which have a circular minimum at LEVEL=0, but CONTOUR is unable to
>> find it!

Well, just set your minimum level to min(z)+epsilon,
where epsilon is a small number (i.e. 0.001 in this case),
if you have a very flat bottom you need to contour out.
(but please note that your z does not have a flat bottom,
so it's a poor example...)

Ciao,
Paolo

>
> According to my colleague Matt, what you should see at the
> minimum of a contour plot is....nothing! I think I have to
> agree. A contour line is suppose to enclose something.
> What could be enclosed at the minimum value of a data set?
> Right. Nothing.
>
> You could hold a flat sheet of paper under your 2D surface
> and draw a line where the surface touched the paper. But
> the word for that would be an "etching" or an "imprint",
> not a "contour". What you want, and what a contour plot
> is designed to give, are two different things. Or at least
> it seems that way to us. :-)
>
> Cheers,
>
> David
>
> --
> David Fanning, Ph.D.

> Coyote's Guide to IDL Programming (www.dfanning.com)
> Sepore ma de ni thui. ("Perhaps thou speakest truth.")
